MANUFACTURING NUMBERS:

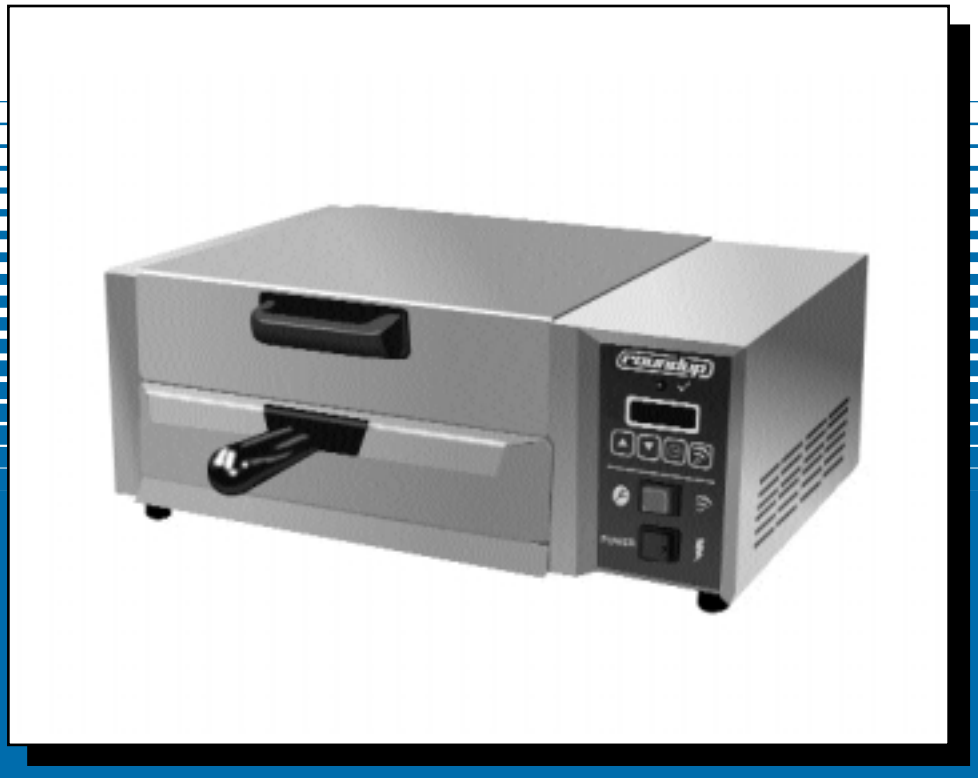
9100420
9100426
9100428
9100430
9100436
9100438
9100450
9100456
9100458
9100460
9100462
9100466
9100468
9100480
9100486

roundup
FOOD EQUIPMENT DIVISION

MIRACLE STEAMER

Models MS-150/155, MS-250/255 & MS-355

P/N 1010699 Rev. C



Owner's Manual

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OWNER INFORMATION

General

The Miracle Steamer produces steam using plain tap water for quick heating and reconstituting of food items. Simple pushbutton action delivers a fully adjustable impulse of steam. Because the amount of steam is consistent, it removes the guesswork and produces a uniform finished product from one operator to the next.

This manual provides the safety, installation and operating procedures for the Miracle Steamer. We recommend that all information contained in this manual be read prior to installing and operating the unit.

Your Miracle Steamer is manufactured from the finest materials available and is assembled to Roundup's strict quality standards. This unit has been tested at the factory to ensure dependable trouble-free operation.

Warranty Information

Please read the full text of the Limited Warranty in this manual.

If the unit arrives damaged, contact the carrier immediately and file a damage claim with them. Save all packing materials when filing a claim. Freight damage claims are the responsibility of the purchaser and **are not** covered under warranty.

The warranty **does not extend to:**

- Damages caused in shipment or damage as result of improper use.
- Installation of electrical service.
- Normal maintenance as outlined in this manual.
- Malfunction resulting from improper maintenance.
- Damage caused by abuse or careless handling.
- Moisture damage to electrical components.
- Damage from tampering with, removal of, or changing any preset control or safety device.

IMPORTANT

A.J. Antunes & Co. reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment.

IMPORTANT! Keep these instructions for future reference. If the unit changes ownership, be sure this manual accompanies the equipment.

Service/Technical Assistance

If you experience any problems with the installation or operation of your unit, contact your local Roundup Authorized Service Agency. They can be found in the service agency directory packaged with the equipment.

Fill in the information below and have it handy when calling your authorized service agency for assistance. The serial number is on the specification plate located on the rear of the unit.

Purchased From: _____

Date of Purchase: _____

Model No.: _____

Serial No.: _____

Mfg. No.: _____

Refer to the service agency directory and fill in the information below:

Authorized Service Agency

Name: _____

Phone No.: _____

Address: _____

Use only genuine Roundup replacement parts in this unit. Use of replacement parts other than those supplied by the manufacturer will void the warranty. Your Authorized Service Agency has been factory trained and has a complete supply of parts for this unit.

You may also contact the factory at **1-877-392-7854** or **1-630-784-1000** if you have trouble locating your local authorized service agency.

Model Designation

MS-150XX

TYPE OF POWER CORD
- H = HARMONIZED
- C = COMMERCIAL

TYPE OF PLUG
- C = CEE 7/7 Schuko
- F = NEMA 5-15P
- V = NEMA 6-20P

- 50 = Timer/Spatula Model
- 55 = Timer/Drawer Model

- 1 = Self-Contained Water Tank
- 2 = Direct Water Hook-Up
- 3 = Front Water Drawer

IMPORTANT SAFETY INFORMATION

Throughout this manual, you will find the following safety words and symbols that signify important safety issues with regards to operating or maintaining the Miracle Steamer.

⚠ WARNING ⚠

GENERAL WARNING. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment and/or severe bodily injury or death.

⚠ WARNING ⚠

ELECTRICAL WARNING. Indicates information relating to possible shock hazard. Failure to observe may result in damage to the equipment and/or severe bodily injury or death.

⚠ CAUTION ⚠

GENERAL CAUTION. Indicates information important to the proper operation of the equipment. Failure to observe may

WARNING

HOT SURFACE WARNING. Indicates information important to the handling of equipment and parts. Failure to observe

In addition to the warnings and cautions in this manual, use the following guidelines for safe operation of the unit.

- Read all instructions before using equipment.
- For your safety, the equipment is furnished with a properly grounded cord connector. Do not attempt to defeat the grounded connector.
- Install or locate the equipment only for its intended use as described in this manual. Do not use corrosive chemicals in this equipment.
- Do not operate this equipment if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
- This equipment should be serviced by qualified personnel only. Contact the nearest Roundup authorized service facility for adjustment or repair.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.

The following warnings and cautions appear throughout this manual and should be carefully observed.

- **Turn the unit off, disconnect the power source and allow unit to cool down before performing any service or maintenance on the unit.**
- **The equipment should be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with separate electrical lines, protected by fuses or circuit breaker of the proper rating.**
- **All electrical connections must be in accordance with local electrical codes and any other applicable codes.**
- **WARNING ELECTRICAL SHOCK HAZARD. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.**
  - **Electrical ground is required on this appliance.**
  - **Do not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.**
  - **Do not use an extension cord with this appliance.**
  - **Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.**
- **This equipment is to be installed to comply with the basic plumbing code of the Building Officials and Code Administrators, Inc. (BOCA) and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).**
- **If the supply cord is damaged, it must be replaced by the manufacturer or its service agent, or a similarly qualified person.**
- **Do not clean this appliance with a water jet.**
- **Do not use a sanitizing solution or abrasive materials. The use of these may cause damage to the stainless steel finish.**
- **To ensure proper steaming characteristics, some mineral deposits must be present on generator casting. If, during cleaning, the casting does become free of mineral deposits, one approved method is to add plain tap water to casting and allow it boil off. This will ensure proper steaming characteristics by creating a thin layer of mineral deposits on the casting.**
- **Chlorides or phosphates in cleansing agents (e.g. bleach, sanitizers, degreasers or detergents) could cause permanent damage to stainless steel equipment. The damage is usually in the form of discoloration, dulling of metal surface finish, pits, voids, holes or cracks. This damage is permanent and not covered by warranty.**

- **The following tips are recommended for maintenance of your stainless steel equipment,**
  - **Always use soft, damp cloth for cleaning, rinse with clear water and wipe dry. When required, always rub in direction of metal polish lines.**
  - **Routine cleaning should be done daily using soap, ammonia detergent and water.**
  - **Stains and spots should be sponged using a vinegar solution as required.**
  - **Finger marks and smears should be rubbed off using soap and water.**
  - **Hard water spots should be sponged using a vinegar solution.**

SPECIFICATIONS

Electrical Ratings

Voltage	Watts	Amps	Hertz
120	1800	15.0	50/60
208	3300	15.9	50/60
220	3018	13.8	50/60
230	3300	14.4	50/60
240	3592	15.0	50/60

⚠ CAUTION ⚠

All electrical connections must be in accordance with local electrical codes and any other applicable codes.

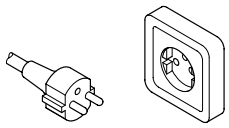
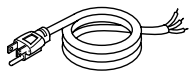
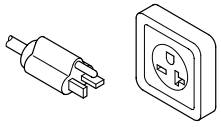
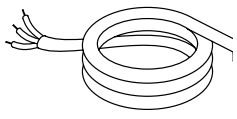
⚠ WARNING ⚠

ELECTRICAL SHOCK HAZARD.

FAILURE TO FOLLOW THE INSTRUCTIONS IN THIS MANUAL COULD RESULT IN SERIOUS INJURY OR DEATH.

- **Electrical ground is required on this appliance.**
- **Do not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.**
- **Do not use an extension cord with this appliance.**
- **Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.**

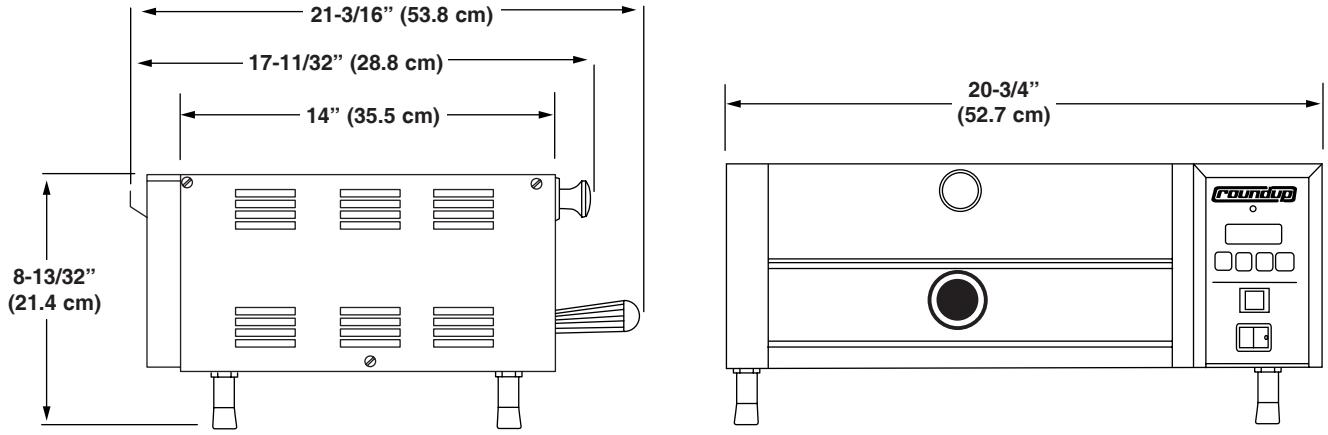
Electrical Cord & Plug Configurations

Letter Code*	Description	Configuration
C	CEE 7/7 Schuko	
F	NEMA 5-15P	
V	NEMA 6-20P	
C H	Commercial Cord Harmonized Cord	

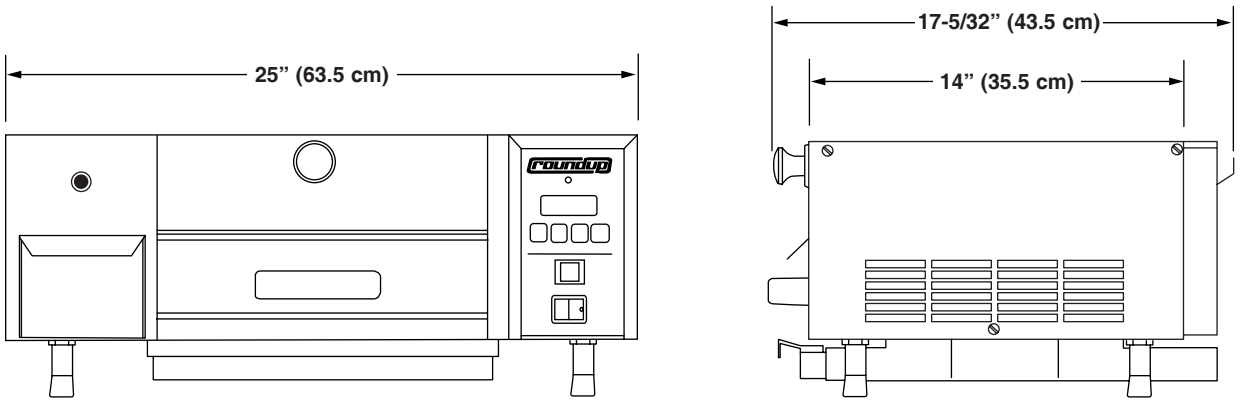
**** Used in Model Designation***

Dimensions

MS-150/155 & MS-250/255



MS-355



INSTALLATION

Unpacking

1. Remove unit and all packing materials from shipping carton.
2. Open the large box. It should contain the following:
   - Miracle Steamer,
   - Handle, Handle Guard & Shoulder Bolt, (**MS-150/250 only**)
   - Water Hookup Kit (MS-250 only).

NOTE: If any parts are missing or damaged, contact Antunes Technical Service IMMEDIATELY at 1-877-392-7854 or 1-630-784-1000.

3. Remove all packing materials and protective coverings from the unit.
4. Remove and wash all removable parts in soap and water. Rinse with clean hot water and allow to air dry.
5. Wipe all surfaces of the unit with a hot damp cloth.

NOTE: Do not use a dripping wet cloth. Wring out before use.

6. **MS-150/250 Models:** Assemble the handle, handle guard and mounting bolt to the spatula as shown in Figure 1.
7. Re-install all removed parts.

Equipment Setup

GENERAL

When placing the unit into service, pay attention to the following guidelines:

- Make sure power to the unit is off and the unit is at room temperature.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.

ELECTRICAL

1. Place the unit on a sturdy, level table or other work surface. Turn the rocker switch (power ON/OFF to OFF before proceeding.
2. Ensure that the line voltage corresponds to the stated voltage on the units specification label and power cord warning tag.
3. Connect the unit to the power supply.

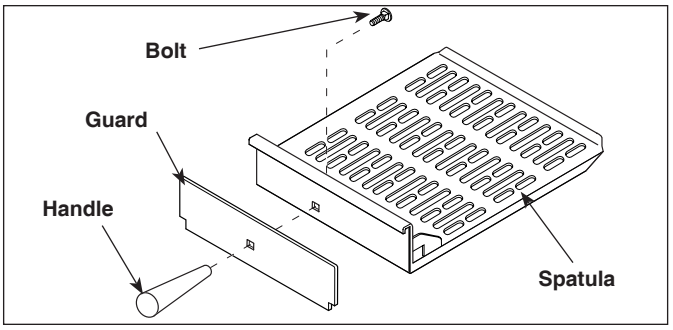


Figure 1. Assembling Handle–MS-150/250 Only

WARNING THIS APPLIANCE MUST BE EARTHED GROUNDED
WARNING THIS APPLIANCE MUST BE EARTHED GROUNDED

120 VAC ONLY

THIS UNIT IS DESIGNED TO OPERATE **ON 120 VOLTS ONLY**. APPLICATION WITH ANY OTHER VOLTAGE SUPPLY COMPLETELY **VOIDS ALL WARRANTY.** PLEASE CHECK YOUR LINE VOLTAGE BEFORE INSERTING THIS PLUG INTO THE RECEPTACLE.

WARNING THIS APPLIANCE MUST BE EARTHED GROUNDED
WARNING THIS APPLIANCE MUST BE EARTHED GROUNDED

208 VAC ONLY

THIS UNIT IS DESIGNED TO OPERATE **ON 208 VOLTS ONLY**. APPLICATION WITH ANY OTHER VOLTAGE SUPPLY COMPLETELY **VOIDS ALL WARRANTY.** PLEASE CHECK YOUR LINE VOLTAGE BEFORE INSERTING THIS PLUG INTO THE RECEPTACLE.

WARNING THIS APPLIANCE MUST BE EARTHED GROUNDED
WARNING THIS APPLIANCE MUST BE EARTHED GROUNDED

220-240 VAC ONLY

THIS UNIT IS DESIGNED TO OPERATE **ON 220-240 VOLTS ONLY**. APPLICATION WITH ANY OTHER VOLTAGE SUPPLY COMPLETELY **VOIDS ALL WARRANTY.** PLEASE CHECK YOUR LINE VOLTAGE BEFORE INSERTING THIS PLUG INTO THE RECEPTACLE.

⚠ WARNING ⚠

ELECTRICAL SHOCK HAZARD.

FAILURE TO FOLLOW THE INSTRUCTIONS IN THIS MANUAL COULD RESULT IN SERIOUS INJURY OR DEATH.

- **Electrical ground is required on this appliance.**
- **Do not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.**
- **Do not use an extension cord with this appliance.**
- **The unit should be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with separate electrical lines, protected by fuses or circuit breaker of the proper rating.**
- **Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.**

⚠ CAUTION ⚠

All electrical connections must be in accordance with local electrical codes and any other applicable codes.

PLUMBING

NOTE: Miracle Steamer models are designed to use cold tap water. Distilled water may be used to reduce mineral deposit build-up and reduce maintenance costs.

⚠ CAUTION ⚠

This equipment is to be installed to comply with the basic plumbing code of the Building Officials and Code Administrators, Inc. (BOCA) and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).

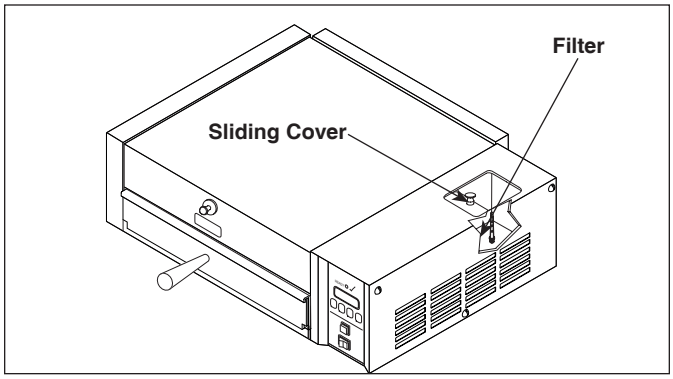


Figure 2. Filling Water Tank–MS-150/155

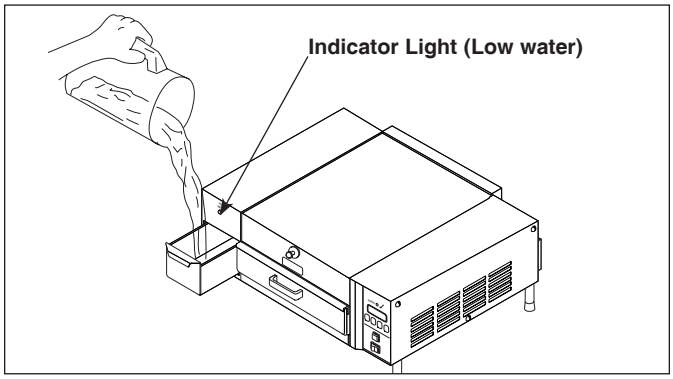


Figure 3. Filling Water Tank–MS-355

Model MS-150/155 & MS-355

⚠ CAUTION ⚠

Use cold water only.

The MS-150/155 & MS-355 models have a self-contained water supply and is portable. To fill the self-contained water tank:

1. **MS-150/155:** Open the sliding tank cover on top of the unit (Figure 2).

   NOTE: Make sure filter inside tank is installed properly.

   MS-355: Open the sliding tank drawer on the side of the unit (Figure 3).

2. Pour in cold tap water. The tank will hold approximately 3 quarts (2.81 liters).

3. Close the water tank.

Model MS-250/255

The **MS-250/255 requires a direct water hookup. An installation kit is packed inside the unit.**

1. Connect the 1/4" (6.5 mm) I.D. flexible tubing to your cold water line using the supplied hose clamp.
2. Push the quick disconnect insert into the fitting on the back of the unit (Figure 4).

NOTE: Incoming water is controlled by a solenoid valve inside the electrical housing of the steamer.

⚠ CAUTION ⚠

Water pressure must not exceed 25 psi (1.7 kg/cm^2 or 172 kPa). Higher water pressures may cause poor performance or flooding. To reduce water pressure, install a water pressure regulator, and set water pressure to 20 psi (1.4 kg/cm^2 or 138 kPa). To order a water pressure regulator from your authorized service center, order Roundup part no. 7000235.

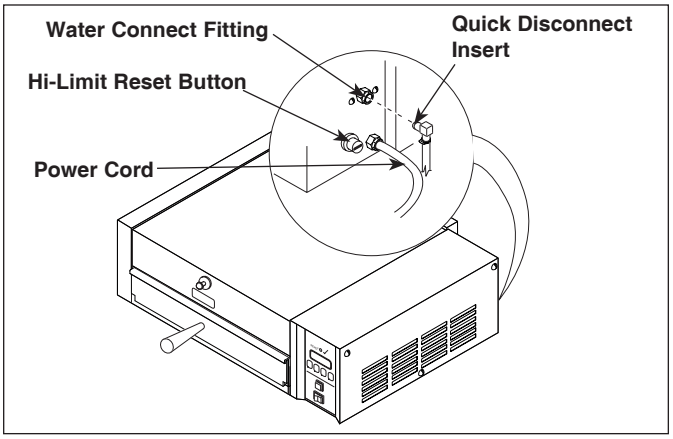


Figure 4. Connecting Water Supply to MS-250/255

OPERATION

General

When the operate button (Figure 5) is pressed, power is supplied to the water pump (MS-150/155/355) or solenoid (MS-250/255). The pump/solenoid operates and water sprays onto the heated steam generator. The water flashes immediately into live steam and shoots down onto the product.

One of two operational modes can be used: **Single Shot** or **Timed Cycle**

SINGLE SHOT

The operate button is pressed to initiate a single timed shot. The control board applies power to the water pump/solenoid and a timed "shot" of steam occurs.

TIMED CYCLE

The control is set to the desired cook time (up to 99 minutes, 59 seconds), then the Start/Stop Button is pressed. The main control board applies power to the water pump/solenoid at regular intervals for the duration of the displayed cycle time. The display counts down to zero when the cycle is complete sounding a audible signal then reverts back to the original programmed cycle time. The unit is ready for the next cycle when the green ready light is on.

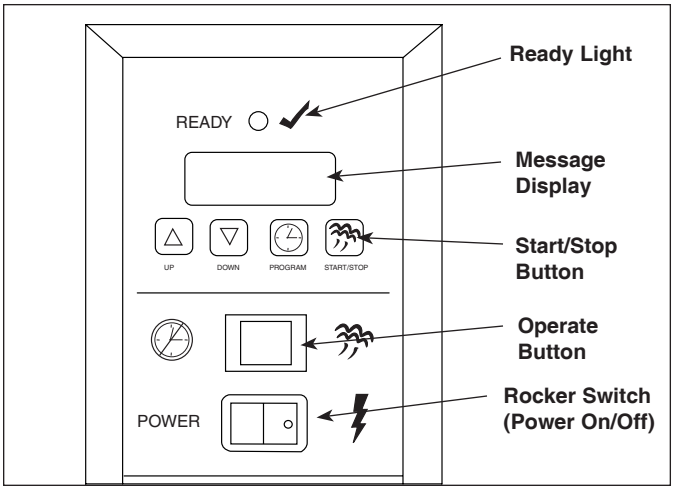


Figure 5. Operating Controls

IMPORTANT: Your 208V and/or 220-240V Miracle Steamer is factory programmed for the following settings:

- Total Cycle Time (CYC) = 15 minutes (Range: 3 secs to 99 mins 59 secs)
- Shot Interval Time (SHO) = 20 seconds (Range: 3 secs to 5 mins 59 secs)
- Steam Shot Time (H_2O) = MS-150/155/355 - (1_00) or 1.00 sec MS-250/255 - (0_70) or 0.70 sec (Range: 0.10 sec to 2.50 sec)

This converts approximately 3/4 oz. (25 milliliters) of water to steam every 20 seconds for a 15 minute cooking cycle. To change any of these settings see ***PROGRAMMING*** on this page**.**

IMPORTANT: Your 120V Miracle Steamer is factory programmed for the following settings:

- Total Cycle Time (CYC) = 2 minutes (Range: 3 secs to 99 mins 59 secs)
- Shot Interval Time (SHO) = 20 seconds (Range: 3 secs to 5 mins 59 secs)
- Steam Shot Time (H_2O) = MS-250/255 - (0_40) or 0.40 sec (Range: 0.10 sec to 2.50 sec)

Operating Instructions

1. Turn the rocker switch (power on/off) to ON (Figure 5).
2. Allow the unit to preheat for approximately 20-30 minutes.

NOTE: Do not push the operate button during warm-up time. The flashing green ready light indicates the unit is NOT up to temperature.

NOTE: The flashing green ready light will become STEADY when the unit is up to temperature.

3. Pull out the spatula and place the product to be steamed onto the spatula.
4. Push the spatula fully into the steamer.
5. **Single Shot:** Press and release the operate button, wait 20 seconds for the steam to penetrate the product.

   Timed Cycle: Press the start/stop button to begin the steaming cycle. The display will count down to zero and an audio signal will sound at the end of the steaming cycle.
6. Remove steamed product.

Programming

⚠WARNING ⚠

To avoid injury, be careful when pulling spatula out from unit. Be sure to allow steam to escape before putting hands or face over the steamer.

CYC (Total Cycle Time) refers to the total amount of cooking time set for the product.

SHO (Shot Interval Time) is the time set between shots of steam during a complete cycle.

H_2O setting (Steam Shot Time) is used to adjust the water volume during each pump/solenoid operation, or "shot" of steam.

The amount of steam produced by your Miracle Steamer depends on the amount of water sprayed onto the steam generator.

Flooding of the generator may occur if the H_2O) setting is set too high. To prevent this from occurring, the Shot Interval Time (SHO) may be increased to allow more time for generator recovery. Adjustments should be made to both values to determine the optimum settings for your cooking needs.

To program the control, refer to Figure 6 and use the following procedure in sequence:

1. Turn the rocker switch (power on/off) to ON. The display will show the factory programmed (default) Total Cycle Time in minutes/seconds (Item A, Figure 6).
2. Depress the program button to change the control from OPERATION to PROGRAM mode.
3. To change the Total Cycle Time factory settings (default), use the UP or DOWN arrow buttons to change the Total Cycle time in minutes (Item B, Figure 6).
4. Depress the program button again, and use the UP or DOWN arrow buttons to change the Total Cycle Time in seconds (Item C, Figure 6).
5. To change the SHO factory settings (default), make sure the control is in PROGRAM mode, then depress the two arrow buttons simultaneously. SHO will be displayed (Item D, Figure 6).
6. Depress the program button once and use the UP or DOWN arrow buttons to change the SHO

(Shot Interval Time) in seconds (Item E, Figure 6).

NOTE: 20 seconds is recommended.

7. Depress the program button again and use the UP or DOWN arrow buttons to change the SHO (Shot Interval Time) in minutes (Item F, Figure 6).

NOTE: 20 seconds is recommended.

8. Depress the program button again and H_2O will be displayed (G, Figure 6).

9. To change the H_2O (Steam Shot) factory settings (default), depress the program button again to display the default setting (Item H, Figure 6). Use the UP or DOWN arrow buttons to increase or decrease the time.

NOTE: Recommended settings are:

MS-250/255 - [0_40] or 0.40 sec (120 VAC)
MS-250/255 - [0_70] or 0.70 sec (208-240 VAC)
MS-150/155/355 - [1_00] or 1.00 sec (208-240 VAC)

10. Press the Start/Stop button to store the changes, exit the PROGRAM Mode and initiate the cooking cycle.

NOTE: The Start/Stop button may be pressed at any time during programming to store the changes and exit the PROGRAM Mode.

NOTE: If no change is made within 10 seconds at any time during the programming process, all changes made up to that point are stored in memory and the control reverts to the OPERATION Mode.

Steaming Tips

NOTE: Use the UP or DOWN Arrow Buttons to change the minute or second time interval.

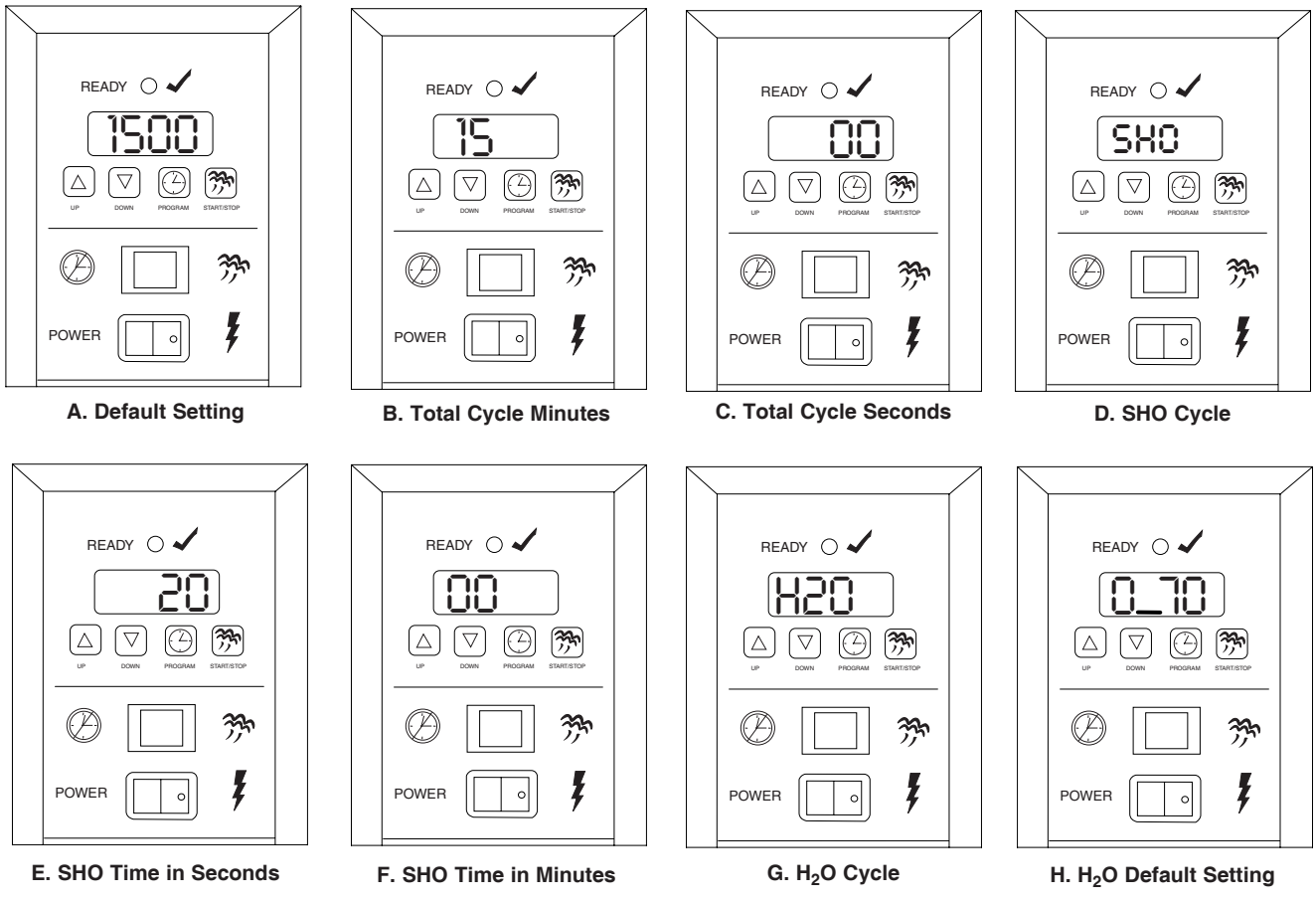


Figure 6. Control Programming Sequence

- Pre-cooked pasta is easily reconstituted, and gives you a hot product without the wetness of the normal “dip” method.
- Experiment with your products and different steaming times–a little more or less steam could change the appearance/flavor.
- If you serve melted cheese on sandwiches, steam is the perfect way to melt cheese.
- A steamed bun (which takes about 10-15 seconds) says “Hot Sandwich” to your customer.
- Vegetables, rice and bread products can be reconstituted by steaming before serving which reduces waste.
- Dinner rolls, muffins, even tortillas can be heated completely and held without drying out the product.
- Use a low plate or pan when steaming to allow full steam penetration and shorter cooking times.
- Use the “1 in 20” rule: Push the operate switch for one second every twenty seconds. This will ensure that the product gets fully heated without using excess water or energy.
- Condensation inside the steamer is normal, but excess moisture indicates too much water is being used. Use the “1 in 20” rule above to correct this problem. Also, examine the steam generator, it may require cleaning.
- Heat meat and bread products apart from each other, then combine in a sandwich. This will keep the meat juices from soaking the bread.
- Finish off a special meal with a steamed hand towel–hot without excess moisture.

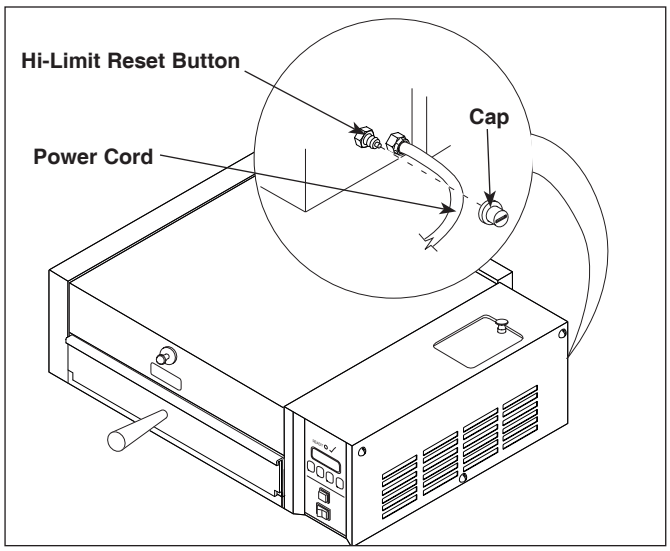


Figure 7. Hi-Limit Reset Button (MS-150 shown)

Hi-Limit Reset Button

A hi-limit thermostat will turn off electrical power to the heater if the unit overheats. To reset this thermostat, allow sufficient time (about 45 minutes) for the unit to cool down, remove the cap and then fully depress the reset button located on the rear of the unit (Figure 7).

If the unit requires continuous resetting, contact your Roundup authorized service agency.

MAINTENANCE

⚠ WARNING ⚠

Turn the unit off, disconnect the power source and allow the unit to cool down before performing any service or maintenance on the unit.

⚠ CAUTION ⚠

Chlorides or phosphates in cleansing agents (e.g. bleach, sanitizers, degreasers or detergents) could cause permanent damage to stainless steel equipment. The damage is usually in the form of discoloration, dulling of metal surface finish, pits, voids, holes or cracks. This damage is permanent and not covered by warranty. The following tips are recommended for maintenance of your stainless steel equipment:

- **Always use soft, damp cloth for cleaning, rinse with clear water and wipe dry. When required, always rub in direction of metal polish lines.**
- **Routine cleaning should be done daily using soap, ammonia detergent and water.**
- **Stains and spots should be sponged using a vinegar solution.**
- **Finger marks and smears should be rubbed off using soap and water.**
- **Hard water spots should be sponged using a vinegar solution.**

NOTE: Frequency of cleaning is determined by water conditions, usage and water filtration systems.

⚠ CAUTION ⚠

Do not use a sanitizing solution or abrasive materials. The use of these may cause damage to the stainless steel finish.

⚠ CAUTION ⚠

If a chemical cleaner is used, be sure it is safe to use on cast aluminum. Observe all precautions and warnings on product label.

⚠ CAUTION ⚠

Unplug power cord before moving and servicing this appliance.

Daily

1. Turn the rocker switch (power on/off) to OFF. Unplug the power cord and allow the unit to cool down before proceeding.
2. Check the water quick disconnect fitting **(MS-250)** and all hose clamps connections for leakage. If leakage is apparent, tighten all clamps or replace part if required.
3. Remove drawer **(MS-155/255 & 355)** or spatula trivvet **(MS-150 & 250)** and liner (Figure 8).
4. Remove steam vent from rear of unit by sliding upward and away from unit (Figure 8). Clean the drawer/spatula and steam vent in hot detergent water, rinse in clear water and allow to air dry.
5. Clean the chamber of any product spills.
6. Clean entire unit with a clean, hot, damp cloth (not dripping wet) and wipe dry.
7. Re-install components.

NOTE: Install steam vent before installing liner and drawer/spatula.

Monthly

Your Miracle Steamer utilizes an open steam generator. Water sprayed onto the generator surface flashes into steam immediately, but the minerals in the water do not steam, they stay on the generator surface. A small amount of mineral deposits are needed for proper operation, but a build-up of excessive mineral deposits causes poor steaming efficiency, excessive moisture (wet steam) and will eventually severely retard the steaming action completely.

Cleaning Steam Generator

1. Turn the rocker switch (power on/off) to OFF. Unplug the power cord and allow the unit to cool down before proceeding.
2. Remove top cover from unit.
3. Remove wing nut and generator cover (Figure 8).

4. Remove the diffuser.

5. Examine all generator orifices (holes). If mineral deposits have formed, place a flat blade screwdriver into openings. Use a gentle twisting motion to scrape openings clean.

NOTE: If the mineral deposits come off in "flakes" or in layers, build-up is excessive.

6. Use a brass or stainless steel wire brush to remove deposits from the generator surface.

7. Pour a delimer solution (not supplied) onto the generator surface and allow to soak for one hour. Be sure to follow the delimer manufacturer's directions for proper mixture and use.

NOTE: Use only a Aluminium safe de-liming product.

8. Remove the delimer solution from the generator and rinse with clear water to remove traces of delimer.

9. Clean the following parts in hot detergent water, then rinse in clear water and allow to air dry:

- ***spatula/drawer***
- ***top cover***
- ***liner***
- ***steam vent***
- ***generator cover***
- ***diffuser***

10. Clean steam chamber of any product spills.

11. Clean unit surface with a hot, clean, damp cloth (not dripping wet) and wipe dry.

12. Re-install all parts and fasten the generator cover.

NOTE: To ensure proper steaming characteristics, some mineral deposits must be present on generator casting. If during cleaning, the casting does become free of mineral deposits, add plain tap water to casting and allow to boil off.

NOTE: In soft water areas, it may be necessary to add a small amount of lime to generator to "season" it. This will ensure proper steaming characteristics by producing a thin coating of mineral deposits on the casting.

Seasoning mixture consists of 2 ounces (59.15 milliliters) baking soda, 2 ounces (59.15 milliliters) lime mixed with 2 ounces (59.15 milliliters) of warm tap water.

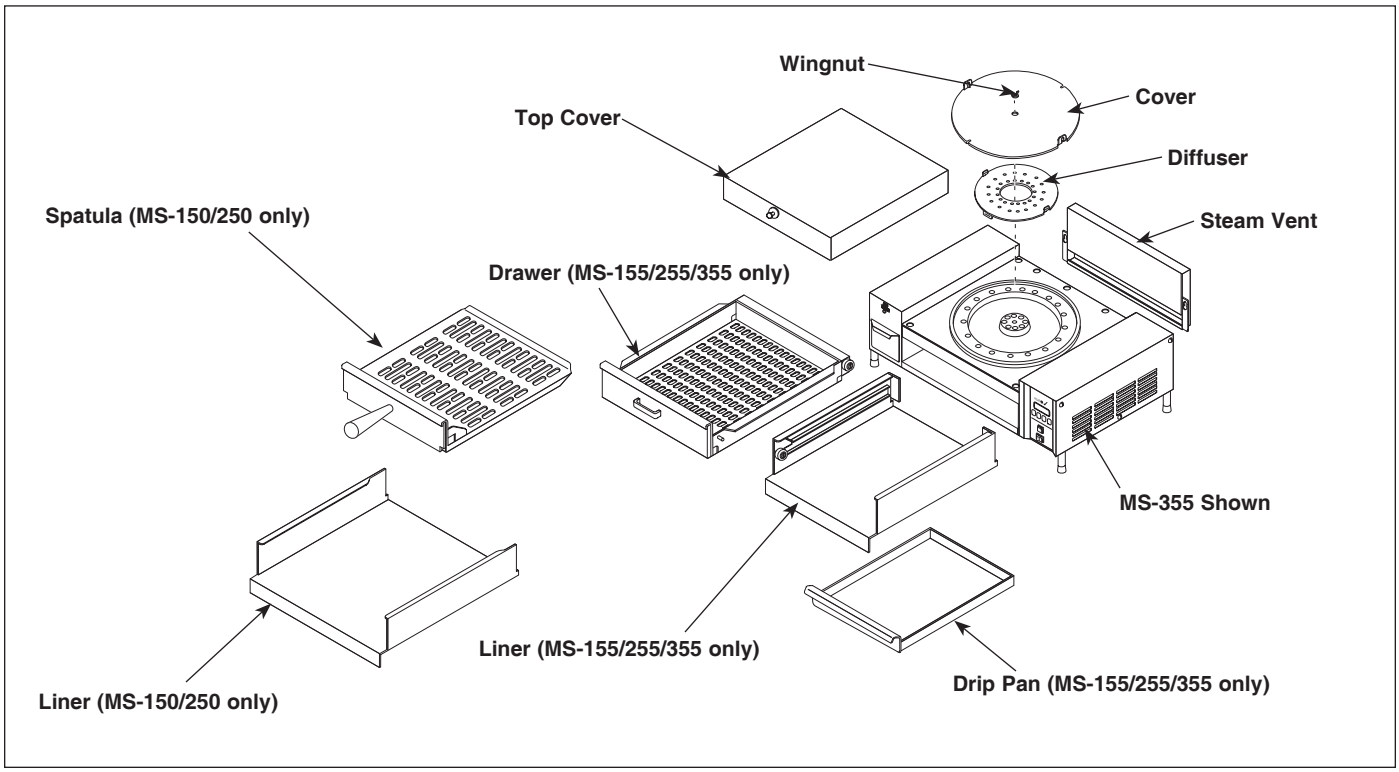


Figure 8. Miracle Steamer Components

Pour the seasoning mixture into the bowl portion of the generator, turn the steamer rocker power (on/off) to ON. Once the mixture has boiled off, remove the remaining loose powder.

13. Plug in power cord and water line (if applicable).

Water Filters–Models MS-150/155

To prevent solids or food products from entering the water pump, the unit uses two water filters (Figure 9). Inspect and clean (if necessary) these filters monthly using the following procedure:

1. Turn the rocker switch (power on/off) to OFF. Unplug the power cord and allow the unit to cool down before proceeding.
2. Remove access cover and tank assembly.
3. Drain water from access cover/tank assembly by sliding tank assembly cover open, tip assembly and pour water into a container or sink.
4. Remove top filter located inside the tank by pulling it out (Figure 9).
5. Remove bottom filter located in water tank outlet tube by disconnecting the hose from the outlet and removing filter (Figure 9).
6. Clean filters by running them under tap water. Replace them if they are torn or damaged.
7. Install bottom filter inside the water outlet tube. Install outlet hose and clamp.
8. Install top filter into water outlet tube inside the tank.
9. Install access cover and tank assembly.
10. Fill water tank and test unit.

NOTE: The MS-355 does not use a water filter.

Direct water hook-up Units (MS-250/255)

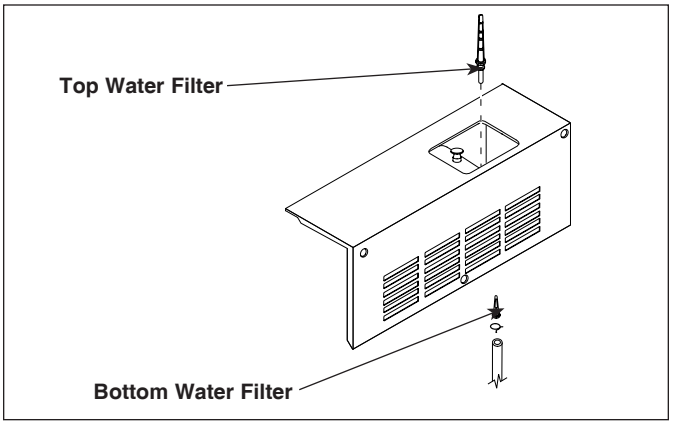


Figure 9. Water Filters–MS-150/155

TROUBLESHOOTING

⚠WARNING⚠

To avoid possible personal injury and/or damage to the unit, inspection, test and repair of electrical equipment should be performed by qualified service personnel. The unit should be unplugged when servicing, except when electrical tests are required.

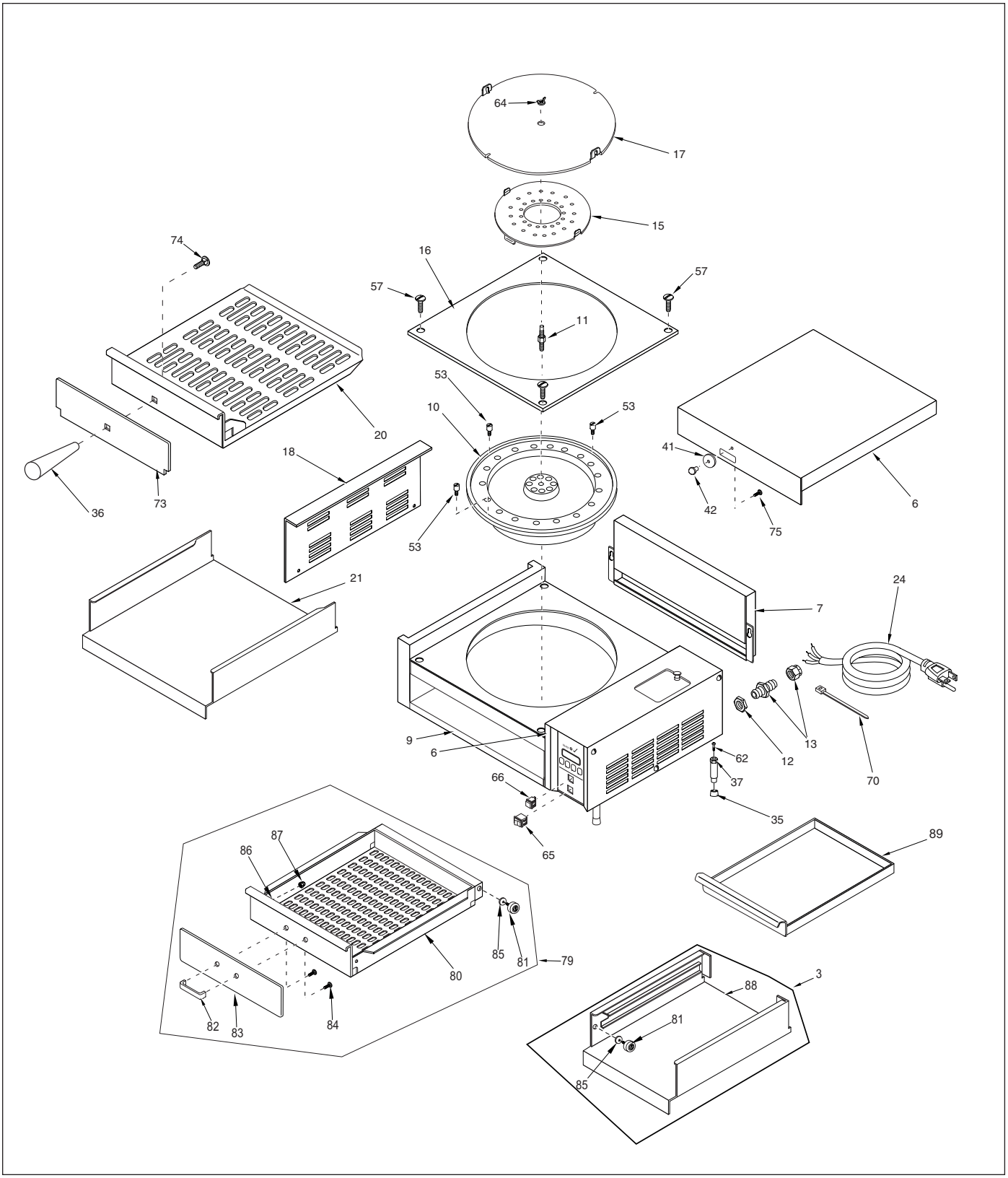
Problem	Possible Cause	Corrective Action
Unit will not heat up. Rocker (power on/off) switch is ON.	Unit is not plugged in.	Plug power cord into outlet.
	Loose connections.	Check connectivity of the power cord and connector.
	Circuit breaker is off or has been tripped in main power supply.	Turn on or reset circuit breaker.
	Defective wiring.	Contact maintenance or AJA Authorized Service Center.
	Inoperable power cord.	Inspect for burned or worn prongs and connector. Contact maintenance. or AJA Authorized Service Center.
	Hi-Limit thermostat tripped or inoperable (see page 11).	Contact maintenance or AJA Authorized Service Center.
	Inoperable heater relay.	Contact maintenance or AJA Authorized Service Center.
	Inoperable generator.	Contact maintenance or AJA Authorized Service Center.
Unit heats up but will not steam. or Steam product unevenly. or Requires multiple cycles to melt cheese or otherwise prepare the product.	Restrictor tube and/or generator tubes are clogged.	Clean restrictor tube and/or generator tubes.
	Low water pressure.	*(Units with regulators) Verify pressure is set to 20 psi (138 kPa).
	Diffuser is missing.	Re-install the diffuser.
	Water filters clogged.	Remove filters and clean.
	Loose electrical connection at water pump/solenoid valve, or inoperable water solenoid valve.	Contact maintenance or AJA Authorized Service Center.
	Defective momentary switch.	Contact maintenance or AJA Authorized Service Center.

Problem	Possible Cause	Corrective Action
Steam from generator is reduced compared to former operation.	Restrictor tube or generator tubes are clogged.	Clean restrictor tube and/or generator tubes.
	Flooding condition.	Allow 20 minutes for excess water to evaporate and generator to recover to 375°F.
	Insufficient preheat.	Allow excess water on the generator casting to evaporate and preheat 20 minutes before operating. DO NOT operate steamer during preheat cycle.
	Filters require cleaning.	See page 14.
	Control board setpoint temperature too low.	Surface temperature of the casting should be between 375°- 425° F (191°- 218°C) when the red light on the control board turns off. If the temp is too low, contact maintenance or AJA Authorized Service Center.
	Heavy deposit buildup on the generator.	See maintenance procedure under ***Cleaning Generator.***
Unit becomes flooded or always steaming. Power ON, solenoid makes a chattering noise. or Unit floods overnight. Power OFF.	Incorrect water pressure.	*(Regulated units only.) Set water pressure to 20 psi (138 kPa).
	Solenoid valve inoperable or particles in the valve.	May need to cleaned or replaced. Contact maintenance or AJA Authorized Service Center.
	Control board is not programmed properly.	Verify programming as described in the ***Programming*** section.
	Control board is inoperable.	Contact maintenance or AJA Authorized Service Center.
Water leaking in the electrical housing.	Pin hole leak in the hoses.	Replace the hoses.
	Inlet tube or restrictor tube is loose.	Tighten the loose fittings.
	Generator tube is loose or damaged.	Tighten loose fittings or contact maintenance or AJA Authorized Service Center.

Problem	Possible Cause	Corrective Action
Unit heats up, pump or solenoid valve works with the momentary switch but will not steam during timer cycles.	Programming.	See pages 8-10.
	If Ready light does not light but the unit steams regularly, the Ready light is inoperable.	Contact maintenance or AJA Authorized Service Center.
	If the Ready light does light and the unit does not steam, the control board is inoperable.	Contact maintenance or AJA Authorized Service Center.
	*(Direct Feed Units) Quick-disconnect not connected properly or inoperable.	Make sure the quick-disconnect and O-ring are properly positioned and are not damaged. Replace damaged parts.
	Water volume adjustment is too low.	Adjust the water volume control. See ***Calibration*** section of the manual.
	Water filter clogged.	Remove and clean filter.
	Inoperable solenoid or solenoid damage caused by connecting a hot water supply line.	Make sure unit is connected to a cold water supply. Contact maintenance or AJA Authorized Service Center.
	Inoperable control board.	Contact maintenance or AJA Authorized Service Center.
Steam coming out around top covers or sides.	Wingnut is loose.	Tighten wingnut.
	Generator cover damage.	Adjust or replace generator cover.

REPLACEMENT PARTS

MS-150/155/250/255



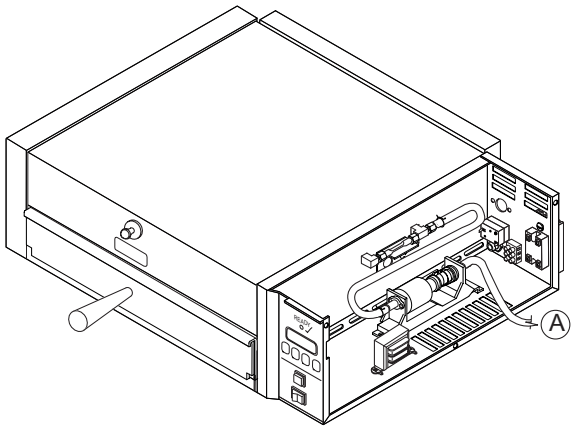
MS-150/155/250/255

Item	Part No.	Description	Qty.
1	0010159	Filter Assy., Water Tank (MS-150)	1
2	4050125	Relay	1
3	0010584	Inlet Hose Assy. (MS-250)	1
4	0011114	Pump/Tube Assy., 24V (MS-150)	1
5	0011123	Solenoid Valve Assy. (MS-250)	1
6	0011289	Top Cover Assy.	1
7	0011314	Chimney Assy.	1
8	0021131	Floor/Chassis Weldment	1
9	0021179	Access Cover Weldment (MS-150)	1
10	0100217	Generator, 230V	1
	0100218	Generator, 208V	1
	0100233	Generator, 120V	1
11	0300129	Stud, Cover Hold Down	1
12	0400138	Locknut, 1/2”	1
13	0400251	Strain Relief	1
14	0502199	Spacer	2
15	0503431	Diffuser, Steam	1
16	0503432	Bracket, Filler	1
17	0503433	Cover, Generator	1
18	0503434	Cover, End Housing	1
19	0503435	Retainer, Thermocouple	1
20	0503867	Spatula (MS-150/250 only)	1
21	0503440	Liner, Cavity (MS-150/250 only)	1
	0021314	Liner, Cavity (Lockable)	1
22	0503441	Access Cover (MS-250)	1
23	0503472	Bracket, Hi-Limit Support	1
24	0700452	Power Cord, NEMA 6-20P	1
25	0800359	Trivet, Spatula (MS-150/250 only)	1
26	1000967	Label, Marking	1
27	1001036	Label, Control Panel	1
28	2000203	Tube, Restrictor, 1/4”	1
29	2000207	Tube, Inlet, 1/4 x 2-1/2” Long (MS-250)	1
30	2040103	Connector, Male, 1/4 x 1/8 NPT (MS-250)	1
31	2040106	Adapter, Tube/Hose (MS-150)	1
32	2040145	Elbow, Female, 1/8” x 1/4”	1
33	2040146	Tee, Female, 1/8” x 1/4”	1
34	2090101	Filter, Water Line (MS-150)	1
35	2100109	Foot, Rubber	2
36	2100119	Handle, Spatula (MS-150/250 only)	1
37	4050180	Heat Sink	1
39	2100170	Knob, Chrome (MS-150)	1
41	2100250	Guard, Knob	1
42	2100273	Knob	1
43	2110101	Clamp, Hose, 3/8 (MS-150)	1
44	2110103	Clamp, Hose, 1/2” (MS-150)	1
46	2190102	Generator Tube, Teflon, 4-1/2” Lg. (MS-250)	1
47	2190105	Generator Tube, Teflon (MS-150)	2
48	300P102*	Nut, Speed, “U”, #8-32	2
49	304P105*	Nut, Hex, KEPS, #4-40, Zinc	4
50	306P101*	Nut, Hex, #6-32	2
51	306P105*	Screw, Machine, #6-32 x 1/2” (MS-150)	2
52	306P123*	Screw, Machine, #6-32 x 7/8”	2
53	306P130*	Nut, Hex, KEPS, #6-32	2
54	306P134*	Screw, Machine, #6-32 x 3/8	3
55	308P103*	Screw, Machine, #8-32 x 1/4” (MS-150)	6
56	308P103*	Screw, Machine, #8-32 x 1/4” (MS-150)	19
57	308P105*	Screw, Machine, #8-32 x 1/2”	4
58	308P120*	Screw, Machine, #8-32 x 5/8” (sltrshd)	4
59	308P124*	Screw, Machine, #8-32 x 1/2” (one-way)	1
60	308P143*	Nut, Hex, KEPS, #32-1/2”	2
61	310P136*	Screw, Machine, #10-32 x 1-1/4”(splanhd)	4
62	310P149*	Screw, Machine, #10-32 x 7/8” (MS-250)	2
63	310P149*	Screw, Machine, #10-32 x 7/8” (MS-150)	2
64	325P170*	Nut, Wing, 1/4-20	1
65	4010137	Rocker Switch, Power On/Off 25A-250V	1
66	4010166	Switch, Momentary	1
	4010190	Switch, Momentary, Clear (for Mfg #9100432 only)	1
67	4010183	Transformer, 115-230/24V	1
68	4030314	Thermostat, Hi-Limit	1
69	4050209	Thermocouple, Type-K	1
70	4060107	Cable Tie	3
71	4060304	Terminal Block, 3-Pole	1
72	4070037	Control Board, Temperature/Timer, 24V, 50/60 Hz	1
	4070040	Control Board, Temperature/Timer, 24V, 50/60 Hz (for Mfg. # 9100432 only)	1
73	2100240	Guard, Handle (MS-150/250 only)	1
74	338P102*	Bolt, Handle Mounting (MS-150/250 only)	1
75	325P109*	Bolt, 1/4”-20 x 1/2”	2
76	7000170	Water Pump Valve Kit (Includes 77 & 78)	1
77	4040108	Valve, Discharge Side (white)	1
78	4040148	Valve, Intake Side (clear)	1
79	0011414	Drawer Assy. (Incl. #81-87) (MS-155/255 only)	1
80	0021238	Drawer Weldment (MS-155/255 only)	1
81	2100195	Bearing, Roller, SS (MS-155/255 only)	4
82	2100257	Handle (MS-155/255 only)	1
83	2100264	Guard, Handle (MS-155/255 only)	1
84	325P132*	Screw, Machine, 1/4-20 x 1/2” (MS-155/255 only)	2
85	0502291	Spacer (MS-155/255 only)	2
86	306P107*	Stud, PEM, #6-32 x 3/8” (MS-155/255 only)	2
87	306P137*	Acorn Nut, #6-32 (MS-155/255 only)	2
88	0021237	Liner Weldment (MS-155/255 only)	1
89	0503536	Drip Pan	1

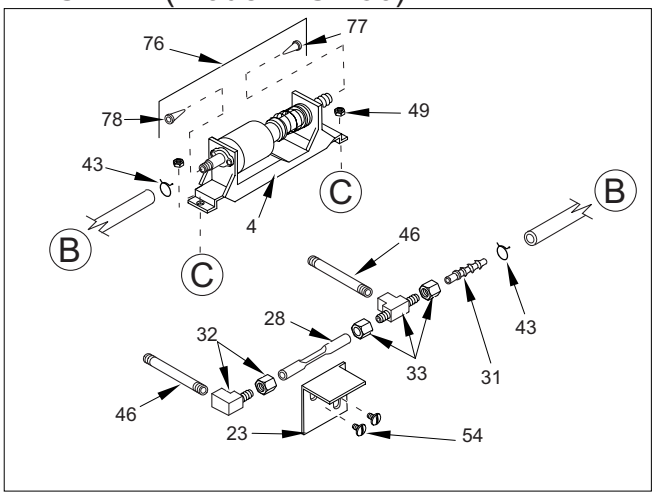
**** Only available in quantities of 10.***

MS-150/155/250/255

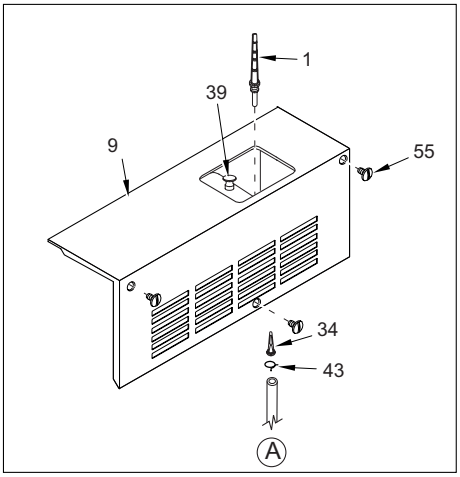
NOTE: Refer to parts list on page 19.



INSET A (Model MS 150)



INSET B (Model MS 150)



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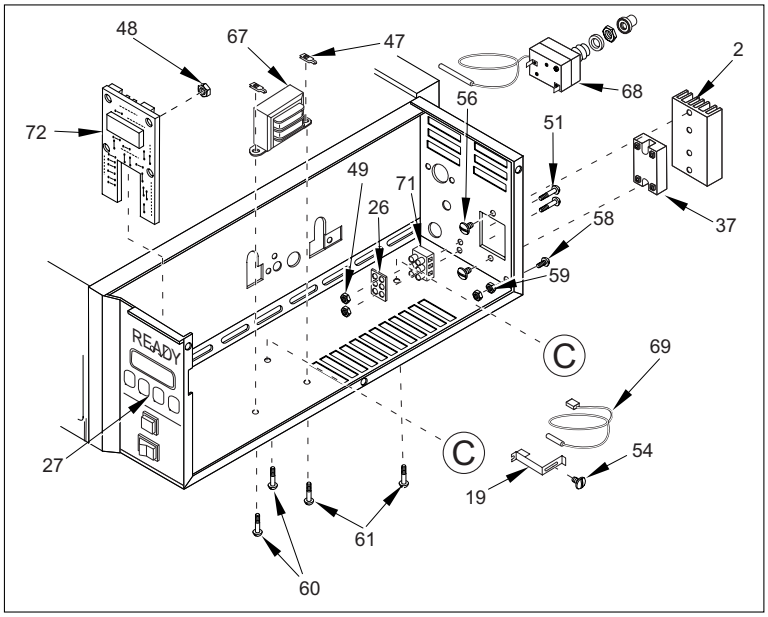
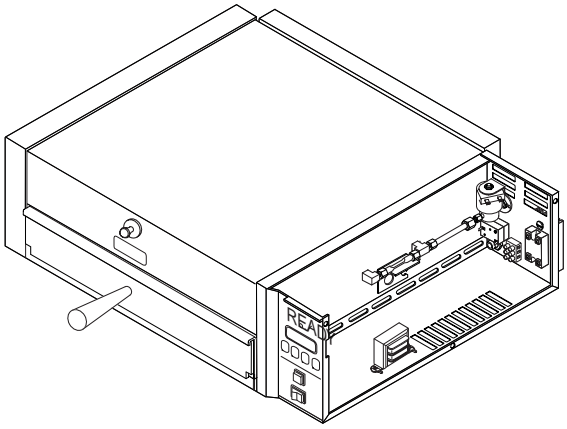
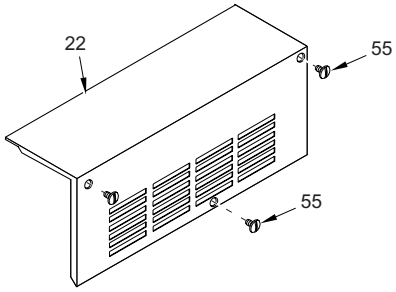


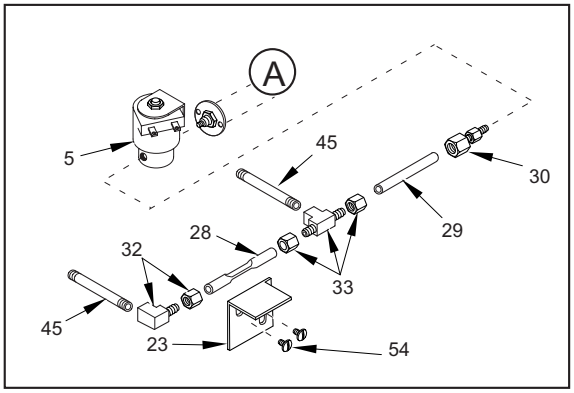
MS-150/155/250/255

NOTE: Refer to parts list on page 19.





INSET A (Model MS 250)



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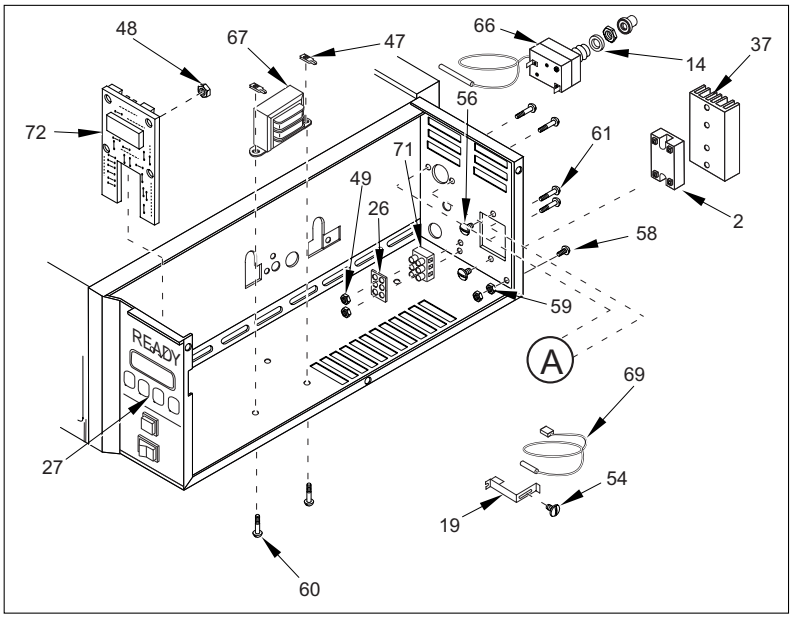


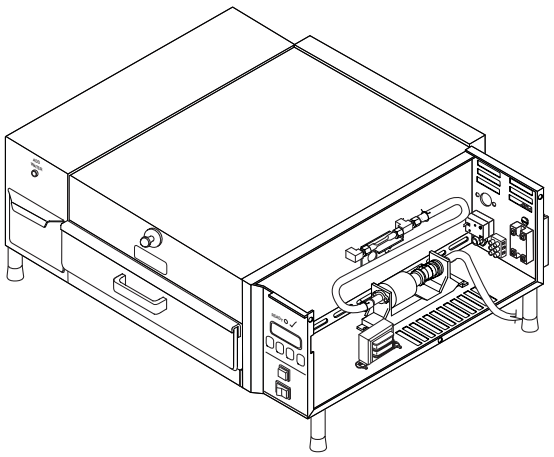
MS-355

Item	Part No.	Description	Qty.
1	0011314	Steam Vent Assy.	1
2	0011408	Top Cover Assy. (Incl. #73-77)	1
3	0011413	Liner Assy. (Incl. #65, 69, 72)	1
4	0011414	Drawer Assy. (Incl. #64-71)	1
5	0011416	Main Housing Assy.	1
	0011418	Main Housing Assy.	1
6	0400138	Locknut, Conduit, 1/2”	1
7	0400251	Strain Relief	1
8	0503441	Cover, Access	1
9	0503536	Drip Pan, Water	1
10	0503712	Cover, Tank Housing	1
11	0700452	Power Cord, NEMA 6-20P	1
12	4050125	Relay	1
13	1001066	Label, Wiring Diagram	1
14	4070037	Control Board, 24V, 50/60 Hz	1
	4070040	Control Board, Temperature/Timer, 24V, 50/60 Hz (for Mfg. # 9100432 only)	1
15	4050180	Heat Sink	1
16	0011370	Leg Assy., 2”	4
17	0021241	Channel Weldment	1
18	0021242	Floor/Chassis Weldment	1
19	0100218	Generator, 208V	1
	0100217	Generator, 230V	1
20	0011447	Float Switch Assy.	1
21	0300129	Stud, Cover	1
22	0400119	Bushing, Shorty, 3/8”	4
23	0500281	Bracket, Pump Mounting	2
24	0502199	Spacer	2
25	0503429	Support, Generator, Upper	1
26	0503431	Diffuser	1
27	0503433	Cover, Generator	1
28	0503435	Retainer, Thermocouple	1
29	0503472	Bracket, Hi-Limit Thermostat Support	1
30	0503713	Guard, Wire	1
31	0700600	Wire Set (not shown)	1
32	1001036	Label, Control Panel	1
33	2000203	Tube, Restrictor, 1/4”	1
34	2000208	Tube, Supply	1
35	2040106	Adapter, Tube/Hose	1
36	2040145	Elbow, Female, 1/8” x 1/4”	1
37	2040146	Tee, Female, 1/8” x 1/4”	1
38	2110101	Clamp, Hose, 3/8”	2
39	2110103	Clamp, Hose, 1/2”	2
40	218P112*	Nut, Nylon, 1/2-13	2
41	2190111	Pipe, Teflon, 3-5/8” Long	2
42	300P102*	Nut, Speed, “U”, #8-32	2
43	304P105*	Nut, Hex, KEPS, #4-40, Zinc	4
44	306P101*	Nut, Hex, #8-32	2
45	306P123*	Screw, Machine, #6-32 x 7/8”	2
46	306P134*	Screw, Machine, #6-32 x 3/8”	3
47	308P103*	Screw, Machine, #8-32 x 1/4”	20
48	308P105*	Screw, Machine, #8-32 x 1/2”	4
49	308P120*	Screw, Machine, #8-32 x 5/8”	2
50	308P124*	Screw, Machine, One-Way, #8-32 x 1/2”	1
51	308P143*	Nut, Hex, KEPS, #8-32	8
52	310P110*	Screw, Machine, #10-32 x 1/2”, SS	4
53	325P170*	Wingnut, 1/4-20	1
54	0500229	Retainer	1
55	4010137	Rocker Switch, Power On/Off, 25A-250V	1
56	4010166	Momentary Switch (Single Shot)	1
	4010190	Switch, Momentary, Clear (for Mfg #9100432 only)	1
57	4010183	Transformer, 115-230/24V	1
58	4030314	Thermostat, Hi-Limit	1
59	4040144	Water Pump, Oscillating, 24V	1
60	4050214	Thermocouple, Type-K	1
61	406P107*	Cable Tie, 1/8” Wide x 5” Long (not shown)	3
62	4060304	Terminal Block, 3-Pole	1
63	4060371	Indicator Light, Blue, 12V	1
64	0021238	Drawer Weldment	1
65	2150194	Bearing, Roller, Nylon, SS	4
66	2100257	Handle	1
67	2100264	Guard, Handle	1
68	325P132*	Screw, Machine, 1/4-20 x 1/2”	2
69	0502291	Spacer	2
70	306P107*	Stud, PEM, #6-32 x 3/8”	2
71	306P137*	Acorn Nut, #6-32	2
72	0021237	Liner Weldment	1
73	0503686	Cover, Top	1
74	2100273	Knob	1
75	2100250	Guard, Knob	1
76	390P101*	Bolt, M8 x 1.25 x 14mm Long	1
77	1000864	Label, Caution HOT	1
78	0011446	Silicone Tube Assy., 26”	1
79	0020520	Silicone Tube Assy., 13”	1
80	7000170	Water Pump Valve Kit (Incl. #81 & 82)	1
81	4040108	Valve, Discharge Side (White)	1
82	4040148	Valve, Intake Side (Clear)	1

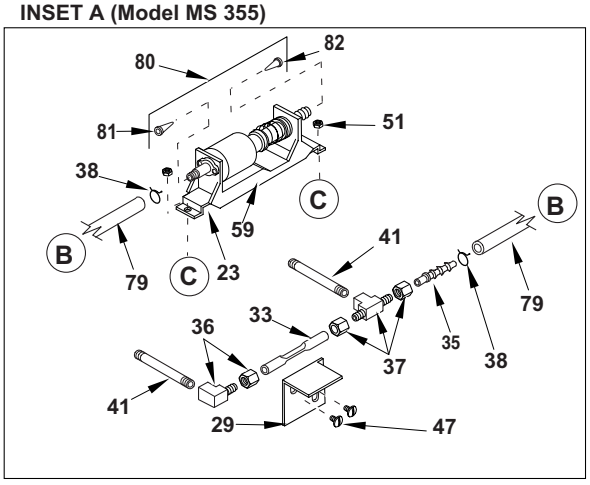
**** Only available in quantities of 10.***

MS-355

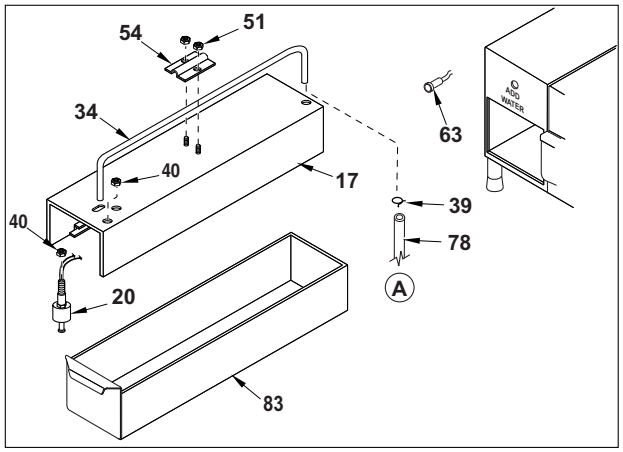
NOTE: Refer to parts list on page 22.



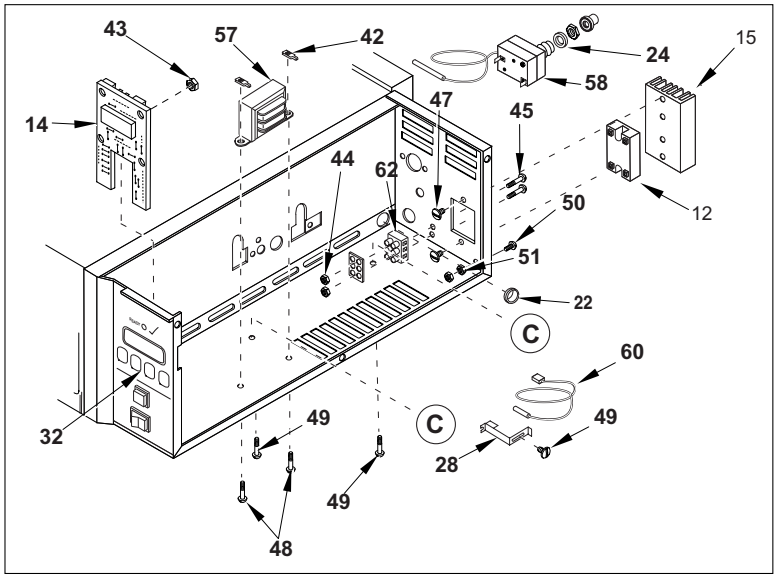
INSET A (Model MS 355)



INSET B (Model MS 355)

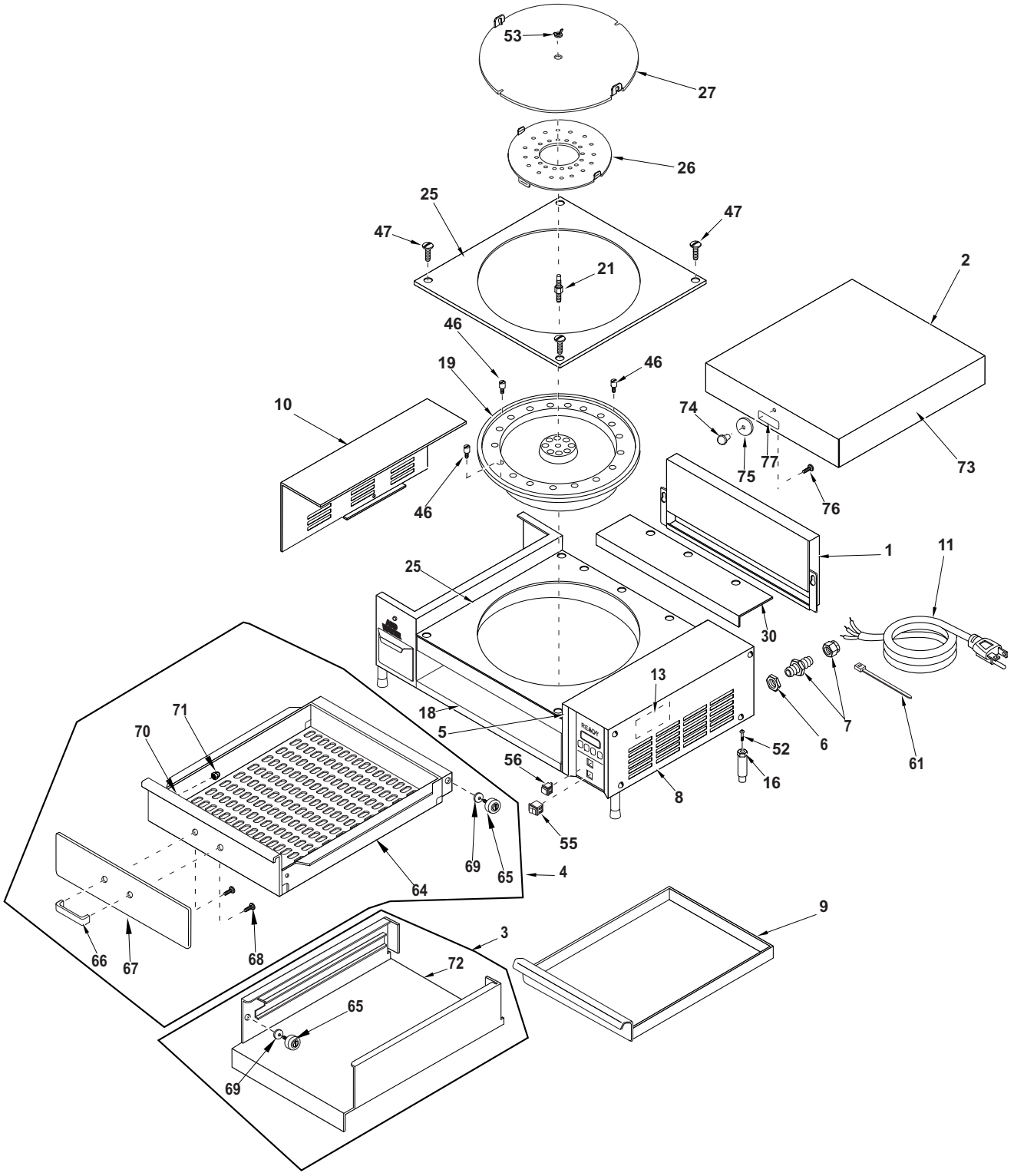


INSET C (Model MS 355)



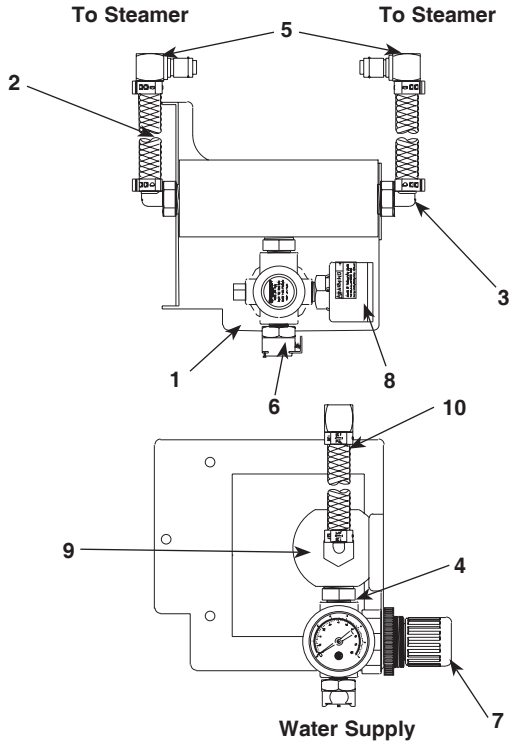
MS-355

NOTE: Refer to parts list on page 22.



REPLACEMENT PARTS (continued)

Water Pressure Regulator Kit - Part No. 7000235

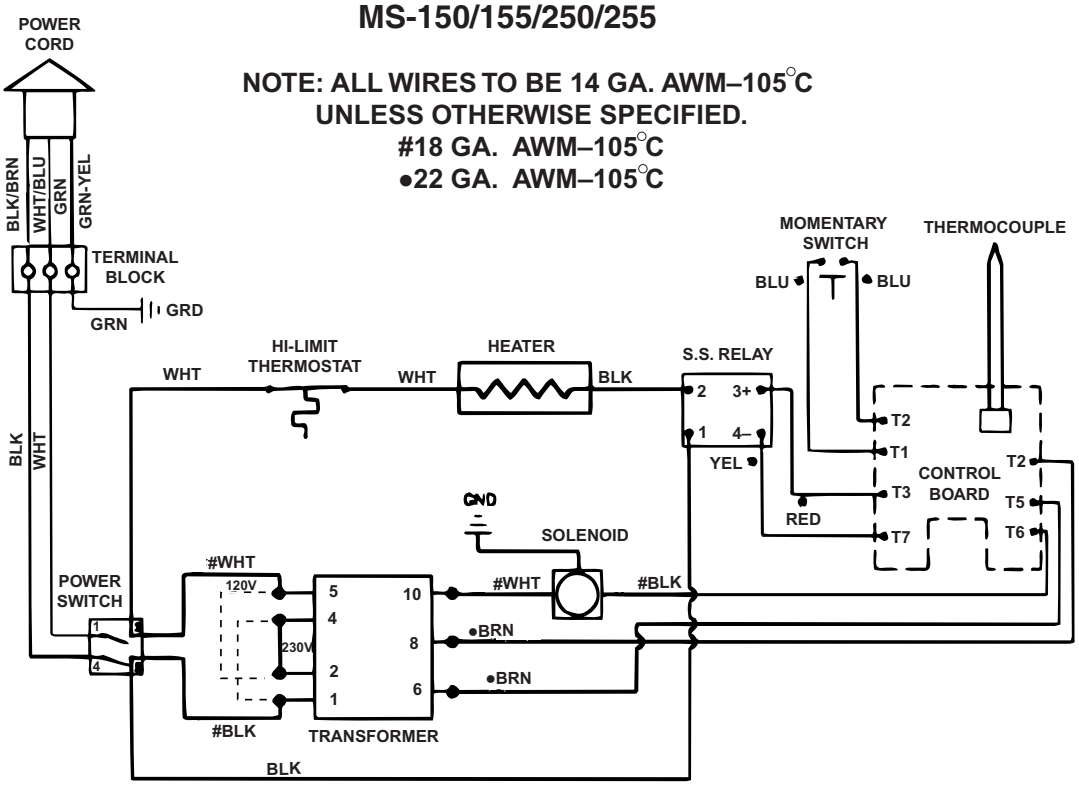


Item	Part No.	Description	Qty.
1	0503615	Bracket, Manifold	1
2	2030125	Tubing, 1/4" I.D., PVC, 12" Long	2
3	2040150	Elbow, Male, Nylon, 1/4" Barb, 3/8" NPT	2
4	2040151	Nipple, Hex, Nylon, 3/8" x 1/4" NPT	1
5	2080105	Elbow, Quick Disconnect	2
6	2080118	Quick Disconnect, 1/8" NPT	1
7	2170116	Regulator, Pressure	1
8	2170114	Gauge, Water Pressure	1
9	2190113	Manifold	1

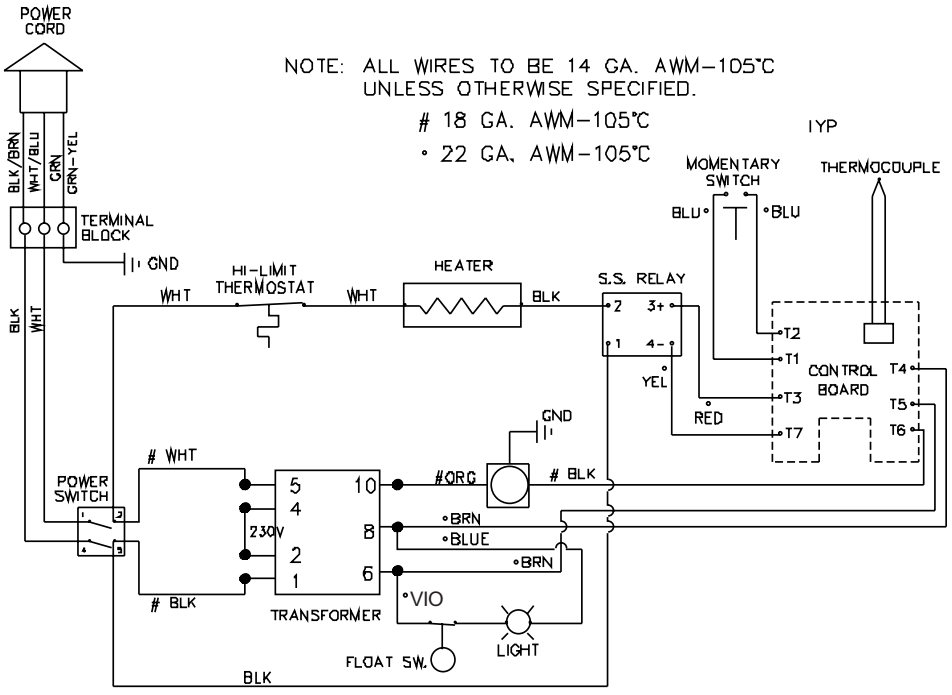
IMPORTANT: Two steamer units can be connected into one water pressure regulator.

WIRING DIAGRAMS

MS-150/155/250/255



MS-355



LIMITED WARRANTY

Equipment manufactured by Roundup Food Equipment Division of A.J. Antunes & Co. has been constructed of the finest materials available and manufactured to high quality standards. These units are warranted to be free from mechanical and electrical defects for a period of one year from date of purchase or 18 months from shipment from factory, whichever occurs first, under normal use and service, and when installed in accordance with manufacturer's recommendations. To insure continued proper operation of the units, follow the maintenance procedure outlined in the Owner's Manual.

1. This warranty does not cover cost of installation, defects caused by improper storage or handling prior to placing of the Equipment. This warranty does not include overtime charges or work done by unauthorized service agencies or personnel. This warranty does not cover normal maintenance, calibration, or regular adjustments as specified in operating and maintenance instructions of this manual, and/or labor involved in moving adjacent objects to gain access to the Equipment. This warranty does not cover consumable items such as platen release sheet and conveyor belt wraps. **This warranty does not pay travel, mileage, or any other charges for an authorized service agency to reach the equipment location.**

2. Roundup reserves the right to make changes in design or add any improvements on any product. The right is always reserved to modify equipment because of factors beyond our control and government regulations. Changes to update equipment do not constitute a warranty charge.

3. **If shipment is damaged in transit, the purchaser should make a claim directly upon the carrier. Careful inspection should be made of the shipment as soon as it arrives and visible damage should be noted upon the carrier's receipt. Damage should be reported to the carrier. This damage is not covered under this warranty.**

4. Warranty charges do not include freight or foreign, excise, municipal or other sales or use taxes. All such freight and taxes are the responsibility of the purchaser.

5. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS HEREBY EXPRESSLY DISCLAIMED. THE REMEDIES DESCRIBED ABOVE ARE EXCLUSIVE AND IN NO EVENT SHALL ROUNDUP BE LIABLE FOR SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OR DELAY IN PERFORMANCE OF THIS WARRANTY.

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